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THE HOUMA POTATO: A NEW VARIETY

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CONTENTS

	Page		Page
Origin	1	Adaptation	3
Description	1	Dissemination	4
Characteristics	2	Summary	4

ORIGIN

The Houma potato was produced as the result of a series of crosses made for the purpose of securing new commercial varieties which combine resistance to mild mosaic with the ability to produce a large yield of smooth tubers, possessing high cooking quality.

This variety was first grown in 1929 at Aroostook Farm, Presque Isle, Maine. Its parentage is given below:

Houma (U. S. D. A. seedling no. 44639)	{ Katahdin	U. S. D. A. seedling	{ Sutton Flourball
		no. 24642	{ Aroostook Wonder
		U. S. D. A. seedling	{ Busola
		no. 40568	{ Rural New Yorker No. 2
	Charles Downing		

The pollen parent, Katahdin, was selected for this cross because of its many desirable characteristics. Tests covering a period of several years have shown that it is highly resistant to mild mosaic and that it transmits this resistance. It also produces tubers of desirable shape with shallow eyes. The other parent, Charles Downing, produces a heavy set of tubers which are of good shape and high cooking quality.

DESCRIPTION

Plants medium to large, erect to spreading; stems thick, prominently angled; nodes not swollen, green; internodes green; wings straight, green; stipules medium large, green, with scant pubescence; leaves long, broad, midrib green, scantily pubescent; primary leaflets medium close, four pairs, elliptical ovate, medium large, mean length 56.34 ± 0.30 mm (2.22 inches), mean width 32.61 ± 0.18 mm (1.28 inches), index 58.16 ± 0.24 ; petioles green; secondary leaflets medium in number, between pairs of primary leaflets and on primary

¹ Calculated by dividing the width of each of 100 leaflets by their length and multiplying the average of these ratios by 100. The leaflets were taken from the fourth leaf from the top of the stem, one leaflet, the distal left lateral, being taken from each leaf. Since the potato leaflet is asymmetrical, the length was determined by taking the average of the measurements from the apex to the base of each respective lobe. This is a modification of the method described in the following work: SALAMAN, R. N. POTATO VARIETIES, pp. 163-170, Cambridge Univ. Press, 1926.

leaflet petioles; tertiary leaflets medium in number; inflorescence medium in branching; leafy bracts none; peduncles medium long, green, pubescence medium; pedicels long, green, pubescence scant.

Flowers.—Calyx lobe tips medium in length, green, sparsely pubescent; corolla medium in size, white; anthers yellow to lemon yellow, pollen scant, poor; style straight, stigma flattened globose, multilobed, green.

Tubers.—Roundish, flattened at apex, width greater than length (fig. 1), medium thick, mean length 65.88 ± 0.45 mm (2.59 inches);² mean width 82.45 ± 0.24 mm (3.25 inches);² mean thickness 63.16 ± 0.40 mm (2.49 inches);²

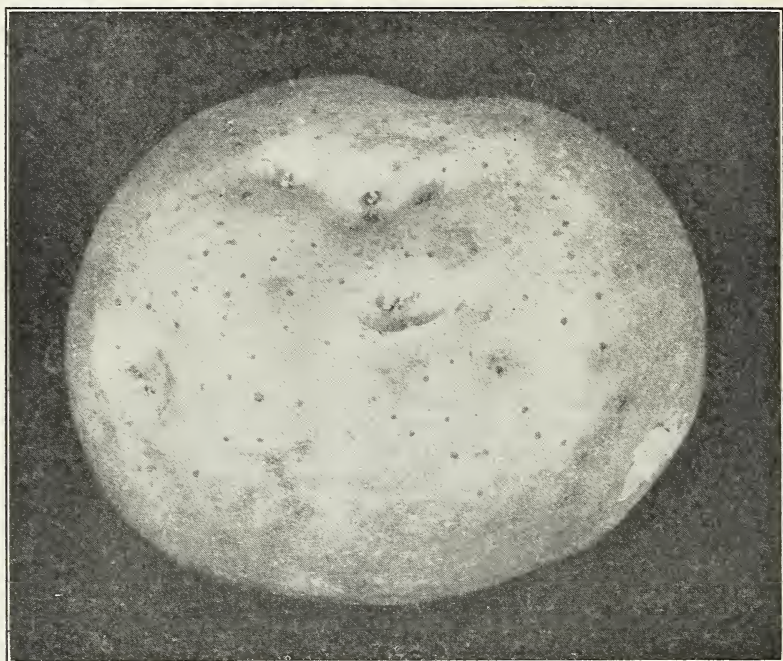


FIGURE 1.—An ideal tuber of the Houma variety.

indexes, width to length 126.65 ± 0.78 ; ³ thickness to width 76.65 ± 0.54 ; ⁴ thickness to length 97.60 ± 1.15 ; ⁴ skin smooth, slightly flaked under hand lens, self-colored, chamois; ⁵ eyes medium in depth, same color as skin; eyebrows short, curved, medium prominent; flesh white; sprouts, color when developed in the dark, pale rosolane purple; ⁵ maturity late.

CHARACTERISTICS

The Houma potato is a vigorous-growing variety that produces smooth, nearly round tubers, slightly flattened at the apex, with shallow eyes. It is of a dark-buff color, classed as white by the commercial trade.

²The average of measurements of 100 tubers, each of a weight of approximately 8 ounces (223–233 g).

³Calculated by dividing the width of each 100 tubers by their length and multiplying the average of these ratios by 100. The data used for calculating the indexes were taken from the same measurements as those used to designate the dimensions of the tubers.

⁴Based on measurements of the same tubers as those used for determining the width to length index, using the same methods of calculation.

⁵RIDGWAY, R. COLOR STANDARDS AND COLOR NOMENCLATURE. 43 pp., illus. Washington, D. C. 1912.

Although it is not immune to mild mosaic it appears to be highly resistant to this disease under field conditions. During the 6 years in which it has been grown in the increase plots at Presque Isle, Maine, only one plant of this variety has shown symptoms of mosaic; the type of mosaic was undetermined. In a single test, where the Houma was grown between rows of plants known to be infected with mild mosaic, no plants were found that showed this disease, while in the same test some of the plants in all the Green Mountain check plots contracted the disease. Under the more severe tuber-graft tests of 1933 and 1934, 10 percent of the plants were infected. No symptoms of potato wart have appeared on this variety when grown on wart-infested soil at Drifton, Pa. It is not resistant to the virus diseases leaf roll, spindle tuber, and vein banding.

The Houma potato ranks high in cooking quality, having been placed in the highest grade in the 1931 tests and in next to the highest of five grades in 1935 in a series of tests conducted in cooperation with the Bureau of Home Economics, United States Department of Agriculture.

ADAPTATION

The Houma potato has been tested in several States to determine its adaptation. At Presque Isle, Maine, the average yield of primes for the 4-year period 1932 to 1935 was 350 bushels per acre, and of totals, which include primes and culls, 414 bushels. A comparison of the yields of Houma with those of two commonly grown commercial varieties and two new varieties is given in table 1.

TABLE 1.—*Comparison of yields of Houma and of four other varieties of potatoes grown at Presque Isle, Maine, 1932–35*¹

Variety	Yield per acre ²		Variety	Yield per acre ²	
	Primes	Total		Primes	Total
	<i>Bushels</i>	<i>Bushels</i>		<i>Bushels</i>	<i>Bushels</i>
Houma.....	350	414	Katahdin.....	323	355
Green Mountain.....	345	383	Chippewa.....	348	396
Irish Cobbler.....	307	339			

¹ A difference of 32.6 bushels in yield for primes and 38.5 bushels for total is significant if 3 times the probable error is taken as the criterion of significance.

² 4-year average.

The data contained in table 1, considered in the light of the probable error, show that in the Maine tests Houma significantly out-yielded Irish Cobbler and Katahdin in totals and Irish Cobbler in primes. It was, however, in the same yield class as Green Mountain and Chippewa in both primes and total. In the higher altitudes, near Jefferson, N. C., the average yield of Houma for a period of 3 years was 281 bushels per acre. In the same series of tests Chippewa yielded 279 bushels and Irish Cobbler 220 bushels.

Houma has been under observation and test for 5 years in Louisiana, having been sent to that State as a single tuber in the fall of 1930 and grown there in the spring of 1931. As the result

of these observations and tests it is considered an outstanding variety for that State. In three tests, two at Baton Rouge and one at Houma, it yielded an average of 277 bushels to the acre. In the same tests Chippewa yielded 273, Katahdin 256, and Triumph 253 bushels per acre.

In addition to high yield it has a number of other characteristics which make it especially desirable for Louisiana. It has high cooking quality and it makes a good crop planted either in the spring or in the fall. The seed stock holds over well in storage from one spring to another, resulting in good stands. The tubers set comparatively deep in the ground and, as a result, sunburned potatoes are rarely found. It sets a large number of tubers which develop into medium-sized potatoes under favorable conditions. The plants are upright in habit of growth, with dark-green foliage, and produce relatively smooth tubers which would be classed commercially as round, a shape favored by the growers in the South. Tests are being conducted in a number of other States to determine the range of adaptability of this variety. Although it has shown promise in the tests at Presque Isle, Maine, in the higher altitudes of North Carolina, and especially in Louisiana, no prediction can be made at present as to whether it can be grown to advantage in other potato-producing sections.

DISSEMINATION

Small quantities of seed stock have been sent to 20 cooperating State experiment stations for tests in 1936. The stock will also be increased as rapidly as possible in Maine, to provide material for more extensive tests and for distribution in sections where it may prove superior to the varieties commonly grown at present. No seed stock is available at this time for distribution.

SUMMARY

The Houma potato is a vigorous-growing, late-maturing variety that produces smooth, round tubers of high cooking quality.

In a number of tests it has compared favorably in total yield with Katahdin, Chippewa, Irish Cobbler, and Green Mountain. It appears to be well adapted to Maine, North Carolina, and particularly to Louisiana, where its many desirable characteristics have led it to be considered a variety of much promise.

No seed is available for general distribution.

